

REMARKS

New claims 55-59 are added. Such new claims are supported by the originally-filed application by exemplary embodiments of Applicant's invention disclosed at, for example, Fig. 7 and page 6, lines 21-23. Claim 34 is amended. Claims 34-40 and 44-59 remain in the application. Reconsideration of the application in view of the amendments and the remarks to follow is requested.

Claims 51-54 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 34-36 and 44-46 stand rejected under 35 U.S.C. §102 as being anticipated by Liaw et al. (5,960,276). Claims 37-39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liaw et al., and further in view of Sunouchi et al. (6,294,422) and Lu et al. (6,107,134). Claims 40 and 49 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liaw et al., and further in view of Sunouchi et al.

Applicant first calls attention to the fact that claims 47 and 48 are pending in the application without rejections. Applicant expects the allowance of such claims in the next office action. If rejections are presented in the next office action against claims 47 and 48, then the present final office action is premature and should be withdrawn pursuant to MPEP 706.07 (8th ed.). That is, the Office Action clearly fails the regulatory mandate of 37 CFR 1.104(b) that "the examiner's action will be complete as to all matters." MPEP §706.07 (8th ed.)

states that "the examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal." (Emphasis added). Clearly, it is possible for the Examiner to develop a clear issue if claims 47 and 48 are not allowed. Presently, the record for appeal is poor due to the deficiencies of the current Office Action if claims 47 and 48 are not allowed.

MPEP §706.07 further states that "...present practice does not sanction hasty and ill-considered final rejections. The applicant who is seeking to define his or her invention in claims that will give him or her the patent protection to which he or she is justly entitled should receive the cooperation of the examiner to that end, and not be prematurely cut off in the prosecution of his or her application." According to MPEP §706.07, final rejections "must also be clearly developed to such an extent that applicant may readily judge the advisability of an appeal." (Emphasis added). To resolve the deficiencies of the Examiner's Action, MPEP §706.07(e) provides that "the examiner may withdraw the rejection of finally rejected claims." (Emphasis added). Moreover, if the finality of the present office action is withdrawn, Applicant requests a refund for the fee presented with this Request for Continued Examination.

Please note, claim 34 is amended to add a comma for clarification of the language, as agreed during the March 24, 2004 interview with the Examiner. Accordingly, as amended, the amendment does not narrow the claim.

Regarding the §112, first paragraph rejection against claims 51-54, the Examiner is respectfully referred to MPEP §2163, Guidelines for the Examination of Patent Applications under 35 U.S.C. 112, Para. 1, "Written Description" Requirement, section I. (8th ed.), which explicitly states: "It is now well accepted that a satisfactory description may be in the claims or in any other portion of the originally filed specification....and applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, **structures**, **figures**, diagrams and formulas that fully set forth the claimed invention....possession may be shown in a variety of ways including...the disclosure of drawings". MPEP §2163, section I. Additionally, the Federal Circuit Court has resolved the issue stating that **drawings alone** may be sufficient to provide the "written description of the invention" required by the first paragraph of 35 U.S.C. §112. *Vas-Cath, Inc. vs. Mahurkar*, 935 F.2d. 1555, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991) (emphasis added). *See also Ex parte Horton*, 226 USPQ 697 (B.P.A.I. 1985) (drawings may be relied upon to satisfy the disclosure requirements of 35 U.S.C. §112). Moreover, the MPEP clearly states, "information contained in any one of the specification, claims or drawings of the application as filed might be added to any other part of the application without introducing new matter." MPEP §2163.06.

For example, claim 51 recites gate lines are disposed in a direction over a plurality of active areas, and wherein widths of the active areas are defined along the direction; and claims 52-53 recite a gate line extends in a direction

over one and an other sub-area, and wherein widths of the sub-areas are defined along the direction. Referring to Fig. 3, active areas 14 and 16 (also referred to as sub-areas at pg. 5 of originally-filed application) are shown with respective widths 1 and 2 extending along a direction. Fig. 3 also illustrates gate line 20 extending along the same direction as the respective widths 1 and 2. Accordingly, the language of the claims, gate lines are disposed in a direction and widths of the active areas (and sub-areas) are **defined along the direction**, are clearly supported by Fig. 3, as is appropriate pursuant to the above authority. Therefore, the §112, first paragraph rejection against claims 51-53 is improper and should be withdrawn.

Regarding the §112, first paragraph rejection against claim 54, such claim recites the parallel configuration of the transistors comprises an electrical parallel circuit. The Examiner is respectfully reminded that MPEP 2163.02 (8th Edition) states the test for sufficiency of support in an application is whether the disclosure relied upon **reasonably conveys to the artisan** that the inventor had possession at that time of the later claimed subject matter. MPEP 2163.02 (8th Edition) *citing* *Ralston Purina Co. v Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (emphasis added). Referring to Fig. 7, respective transistors 42, 44 and 46 are illustrated in an electrical parallel circuit as would be clearly understood by one skilled in the art. Accordingly, claim 54 is clearly supported by Fig. 7, as is appropriate pursuant to the above authorities. Therefore, the §112, first paragraph rejection against claim 54 is

improper and should be withdrawn. In conclusion, with regard to the §112, first paragraph rejections, the Figs. clearly support the language of claims 51-54, and therefore, the §112, first paragraph rejections are improper and should be withdrawn. Moreover, since no other rejections are presented against claims 51-54, such claims are allowable.

Regarding the anticipation rejection against claim 34 based on Liaw, such claim recites a plurality of active areas having widths, defined by shallow trench isolation regions of no greater than about one micron, at least some of the widths being different; and gate lines disposed over the plurality of active areas to provide individual transistors, **those transistors whose widths are different having different threshold voltages from one another**. Accordingly, claim 34 defines widths which are defined by shallow trench isolation regions. To allegedly teach this limitation, the Examiner first refers to Liaw, Figs. 1 and 2, wherein active areas 12N and 12W are defined as channel widths in a first direction. The Examiner next refers to the table in col. 4 and Fig. 4 to teach a correlation between channel widths with different widths having different threshold voltages from one another (pg. 3 and 8-9 of paper no. 17). However, Liaw teaches a second channel width that **extends in a second direction** (shown in Fig. 3B) which is perpendicular to the channel width directions of 12N and 12W and stated as, “[t]he conductive gates 40 have a channel width 42” (col. 4, lines 1-2). In fact, this channel width 42 is introduced as the last line before the discussion of Fig. 4 and the table shown in the col. 4. Accordingly,

a more reasonable interpretation of Liaw is that the column widths of Fig. 4 and the table of column 4 are directed to column widths which extend in the direction as shown in Fig. 3B, not as alleged by the Examiner. Assuming the channel widths of Fig. 4 and the table of column 4 are as shown in Fig. 3B, then Fig. 4 and the table are not referring to width teachings in the direction as recited in claim 34 to a plurality of active areas having widths, and therefore, does not teach or suggest **those transistors whose widths are different having different threshold voltages from one another** as positively recited in claim 34.

At a minimum, it is unclear which direction is defined for the channel widths of the table and Fig. 4 since Liaw defines two directions for "channel widths." Since it is unclear which direction is defined for the channel widths of the table and Fig. 4, there are two conflicting theories which can be developed with respect to the teachings of the table and Fig. 4. "A document so obscure in its terminology that two conflicting theories might be deduced therefrom is too indefinite to be utilized as a reference" *Mobil Oil Corp. vs. W. R. Grace and Co.*, 367 F. Supp. 207, 180 USPQ 418, 433 and 452 (D. Connecticut 1973) (citations omitted) (courtesy copy provided herewith). Pursuant to this authority, since two conflicting theories can be developed with respect to the teachings of the table and Fig. 4 because of the two different directional teachings of the channel widths, Liaw is too indefinite to be utilized as a reference. Without Liaw, the anticipation rejection against claim 34 must fail. Applicant respectfully requests withdrawal of this rejection against claim 34 in the next office action.

Claims 35-40, 51, 55 and 58 depend from independent claim 34, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

For example, claim 37 is rejected for obviousness based on the combination of Liaw, Sunouchi and Lu. Claim 37 recites one of individual transistors comprise a portion of precharge circuitry. In the previous office action, it was unclear as to what combination of art claim 37 was rejected. The Examiner now rejects the claim by the combination of Liaw, Sunouchi and Lu specifically referring to Lu to allegedly teach precharge circuitry (page 7 of paper no. 17). However, in referencing Lu, the Examiner points to the teachings at col. 4, lines 15-45 and col. 1, lines 15-45 (page 5, of paper no. 17). These sections of Lu do not teach or suggest precharge circuitry. Consequently, the combination of Liaw, Sunouchi and Lu do not teach or suggest a positively recited limitation of claim 37, and therefore, claim 37 is allowable.

Moreover, the stated motivational rationale for combining Lu with Liaw and Sunouchi for rejecting claims 37-39 is improper. The Examiner states that Applicant's previous argument against the motivational rationale did not correctly address the reason for which the Examiner combined the references (page 9 of paper 17). The Examiner provides that the motivation for combining these references is Lu's teaching that his invention is dependent upon threshold voltage and further is known to have application within DRAM devices. First, respectfully, these statements do not provide any motivation for modifying the Liaw and

Sunouchi inventions and only state what Lu allegedly teaches. In fact, these statements are so general and broad that each could be used with regard to any reference addressing DRAM circuitry. Consequently, if these were appropriate motivational rationale statements, any reference directed to DRAM circuitry would be appropriately combinable, and this simply is not the case. The Examiner's alleged motivational rationale is devoid to any desirability for the modification as required of a proper obviousness rejection. The Examiner is respectfully reminded that "[p]referably the Examiner's explanation should be such that it provides that impetus necessary to cause one skilled in the art to combine the teachings of the references to make the proposed modification." *Ex Parte Levengood*, 28 USPQ2d, 1300, 1301, Footnote 2, (Bd. Pat. App. and Inter. 1993) (citations omitted). Pursuant to this authority, since the Examiner has not provided that impetus necessary to cause one skilled in the art to combine the teachings of the references, the obviousness rejection is improper and should be withdrawn. Claims 37-39 are allowable for at least this reason.

Regarding the anticipation rejection against claim 44 based on Liaw, such claim recites a plurality of spaced-apart shallow trench isolation regions received by the active area and defining active sub-areas therebetween, individual active sub-areas having respective widths, and a gate line extending over the one and the other sub-area and **defining, in part, separate transistors, wherein each of the separate transistors has a different threshold voltage**. The Examiner refers to the table in col. 4 and Fig. 4 to teach a correlation between channel

widths with different widths having different threshold voltages from one another (pg. 3 and 8-9 of paper no. 17). However, Liaw provides teachings to channel widths that extend in different directions and teaches two different theories that can be presented regarding the teachings of the table and Fig. 4. As mentioned above, Liaw is too indefinite to be utilized as a reference and the anticipation rejection against claim 44 must fail. Applicant respectfully requests withdrawal of this rejection against claim 44 in the next office action.

Claims 45-48, 52, 56 and 59 depend from independent claim 44, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

Regarding the obviousness rejection against independent claim 49, the Examiner first states such rejection is based on Liaw and Sunouchi (pg. 6 of paper no. 17) and then provides teachings of Lu to allegedly teach limitations of claim 49 (pgs. 6-7 of paper no. 17). Claim 49 recites a plurality of transistors being joined in a parallel configuration to provide a pull down circuit coupled to a common node. The Examiner correctly states that Liaw and Sunouchi fail to teach a pull down circuit and relies on Lu to provide the deficiency in teachings (pg. 7 of paper no. 17). However, Lu teaches a pull down control M9 (Fig. 2) illustrated as standing alone with only one common node connected to other transistors. One skilled in the art understands that the pull down control M9 illustrated in Fig. 2 of Lu **is not** joined in a parallel configuration as positively recited in claim 49. Consequently, the combination of art fails to teach or

suggest a positively recited limitation of claim 49, and therefore, claim 49 is allowable.

Additionally, claim 49 recites a plurality of spaced-apart shallow trench isolation regions received by the active area and defining active sub-areas therebetween, individual active sub-areas having respective widths, and a gate line extending over the one and the other sub-area and defining, in part, separate transistors, wherein **the separate transistors have different threshold voltages**. The Examiner refers to the table in col. 4 and Fig. 4 to teach a correlation between channel widths with different widths having different threshold voltages from one another (pg. 3 and 8-9 of paper no. 17). However, Liaw provides teachings to channel widths that extend in different directions and teaches two conflicting theories that can be presented based on the channel widths shown in the table and Fig. 4 of Liaw. As mentioned above, Liaw is too indefinite to be utilized as a reference, and therefore, the obviousness rejection against claim 49 must fail. Applicant respectfully requests withdrawal of this rejection against claim 49 in the next office action. Therefore, claim 49 is allowable.

Furthermore, the motivational rationale for combining Liaw, Sunouchi and Lu is faulty. The Examiner states the motivation to modify the Liaw and Sunouchi inventions is to include a pull down circuitry as taught by Lu to activate a sense amplifier and that Lu teaches sense amplifier structure is already well known in the art. First, the Federal Circuit has rejected the notion that “well

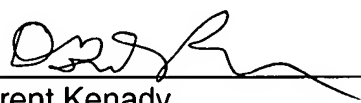
known in the art” can support an obviousness rejection stating that “it is irrelevant in determining obviousness that all or all other aspects of the claim may have been well known in the art.” *Jones v Hardy*, 727, F2d 1524, 1527, 1528, 220 USPQ 1021, 1024 (Fed. Cir. 1984). Next, the primary reference, Liaw does not teach or suggest a sense amplifier. Therefore, the Examiner is suggesting to modify a structure of the primary reference that does not exist in the Liaw invention. There is no reasonable argument why one would be motivated to look to other prior art for teachings regarding activation of a sense amplifier when the primary reference is devoid of sense amplifier teachings. It is inconceivable that there is a motivation to modify the Liaw invention with teachings of Lu when the Liaw invention does not have the structure for which the Examiner is suggesting to modify. The Examiner has failed to provide a proper motivational rationale, and therefore, the obviousness rejection against claim 49 must fail. For this additional reason, claim 49 is allowable.

Claims 50, 53-54 and 57 depend from independent claim 49, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner’s next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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